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**UTILITY
PATENT APPLICATION
TRANSMITTAL**

Only for new nonprovisional applications under 37 C.F.R. § 1.53(b)

Attorney Docket No. RSWCFirst Inventor or Application Identifier W. CaseyTitle Quick Engage/Disengage Pole CleatExpress Mail Label No. 9524997743 US mail 6/12**APPLICATION ELEMENTS**

See MPEP chapter 600 concerning utility patent application contents.

1. ☒ * Fee Transmittal Form (e.g., PTO/SB/17)
(Submit an original and a duplicate for fee processing)
2. ☒ Specification [Total Pages 22]
(preferred arrangement set forth below)
- Descriptive title of the invention
- Cross References to Related Applications
- Statement Regarding Fed sponsored R & D
- Reference to Microfiche Appendix
- Background of the invention
- Brief Summary of the invention
- Brief Description of the Drawings (if filed)
- Detailed Description
- Claim(s)
- Abstract of the Disclosure

3. ☒ Drawing(s) (35 U.S.C. 113) [Total Sheets 4]

4. Oath or Declaration [Total Pages]

- a. ☒ Newly executed (original or copy)
- b. ☐ Copy from a prior application (37 C.F.R. § 1.63(d))
(for continuation/divisional with Box 17 completed)
(Note Box 5 below)
- i. ☐ **DELETION OF INVENTOR(S)**
Signed statement attached deleting inventor(s) named in the prior application, see 37 C.F.R. §§ 1.63(d)(2) and 1.33(b).

5. ☐ Incorporation By Reference (useable if Box 4b is checked)
The entire disclosure of the prior application, from which a copy of the oath or declaration is supplied under Box 4b, is considered to be part of the disclosure of the accompanying application and is hereby incorporated by reference therein.

ADDRESS TO: Assistant Commissioner for Patents
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6. ☐ Microfiche Computer Program (Appendix)
7. Nucleotide and/or Amino Acid Sequence Submission (if applicable, all necessary)
- a. ☐ Computer Readable Copy
- b. ☐ Paper Copy (identical to computer copy)
- c. ☐ Statement verifying identity of above copies

ACCOMPANYING APPLICATION PARTS

8. ☐ Assignment Papers (cover sheet & document(s))
9. ☐ 37 C.F.R. § 3.73(b) Statement ☐ Power of Attorney
(when there is an assignee)
10. ☐ English Translation Document (if applicable)
11. ☒ Information Disclosure Statement (IDS)/PTO-1449 ☒ Copies of IDS Citations
12. ☐ Preliminary Amendment
13. ☐ Return Receipt Postcard (MPEP 503)
(Should be specifically itemized)
14. ☐ Statement(s) ☒ Statement filed in prior application, Status still proper and desired (PTO/SB-09-12)
15. ☐ Certified Copy of Priority Document(s)
(if foreign priority is claimed)
16. ☐ Other:

* NOTE FOR ITEMS 1 & 14: IN ORDER TO BE ENTITLED TO PAY SMALL ENTITY FEES, A SMALL ENTITY STATEMENT IS REQUIRED (37 C.F.R. § 1.37), EXCEPT IF ONE FILED IN A PRIOR APPLICATION IS RELIED UPON (37 C.F.R. § 1.23).

17. If a CONTINUING APPLICATION, check appropriate box, and supply the requisite information below and in a preliminary amendment:

☐ Continuation ☐ Divisional ☐ Continuation-in-part (CIP) of prior application No: _____

Prior application information: Examiner _____

Group / Art Unit: _____

18. CORRESPONDENCE ADDRESS☐ Customer Number or Bar Code Label

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Date

06-07-00

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**STATEMENT CLAIMING SMALL ENTITY STATUS
 (37 CFR 1.9(f) & 1.27(b))—INDEPENDENT INVENTOR**

Docket Number (Optional)

RSWC

Applicant, Patentee, or Identifier Casey, W.

Application or Patent No.:

Filed or issued:

Title Quick Engage/Disengage Rope Cleat

As a below named inventor, I hereby state that I qualify as an independent inventor as defined in 37 CFR 1.9(c) for purposes of paying reduced fees to the Patent and Trademark Office described in:

- ☒ the specification filed herewith with title as listed above
☐ the application identified above.
☐ the patent identified above.

I have not assigned, granted, conveyed, or licensed, and am under no obligation under contract or law to assign, grant, convey, or license, any rights in the invention to any person who would not qualify as an independent inventor under 37 CFR 1.9(c) if that person had made the invention or to any concern which would not qualify as a small business concern under 37 CFR 1.9(d) or a nonprofit organization under 37 CFR 1.9(e).

Each person, concern, or organization to which I have assigned, granted, conveyed, or licensed or am under an obligation under contract or law to assign, grant, convey, or license any rights in the invention is listed below:

- ☒ No such person, concern, or organization exists.
☐ Each such person, concern, or organization is listed below

Separate statements are required from each named person, concern, or organization having rights to the invention stating their status as small entities (37 CFR 1.27).

I acknowledge the duty to file, in this application or patent, notification of any change in status resulting in loss of entitlement to small entity status prior to paying, or at the time of paying, the earliest of the issue fee or any maintenance fee due after the date on which status as a small entity is no longer appropriate (37 CFR 1.28(b)).

William E. Casey
 NAME OF INVENTOR

NAME OF INVENTOR

NAME OF INVENTOR

William E. Casey
 Signature of Inventor

Signature of Inventor

Signature of Inventor

06-07-00
 Date

Date

Date

QUICK ENGAGE/DISENGAGE ROPE CLEAT

FIELD OF THE INVENTION:

This invention relates to cleats for securing ropes in applications such as on trucks and trailers and more particularly to a cleat that features quick engagement, quick secure, quick locking and quick release .

In the context of this specification, the word, "rope", is understood to apply also to cable or similar restraining material

BACKGROUND AND INFORMATION DISCLOSURE:

The ability to tie down an end or middle of a taut rope quickly and securely and to release it quickly is an essential requirement in activities such as tying cargo down on trucks, trailers, boats, particularly sail boats, dismantling canopies, flag poles, clothes lines, etc.

Numerous devices have been disclosed which are intended to improve on the earliest methods which included simply tying the end of the rope around a peg or pole.

A cam type rope cleat includes as a minimum a base with base surface upon which is mounted a rotatable cam and a rope abutment against which the cam presses the rope.

Numerous versions of cleats have been disclosed which are intended to improve the operation of the rope cleat in terms of speed of engagement and disengagement, resistance to slippage and inadvertent disengagement.

For example, U.S. Patent 4,766,835 to Randall discloses cam spindles mounted on a base and extending through a top plate on which are mounted a pair of back to back rope abutments.

U. S., Patent 4,878,270 discloses a/ rope tie-down clamp apparatus for tightening and securing a rope between two points.

U.S. Patent 4,899,423 to Randall discloses a cleat in which the cam has a circumferential groove to improve gripping strength.

U.S. Patent 5,548,873 to Macias discloses a self locking cleat for a rope including a housing, a rotatable generally spherically shaped engaging member (cam) spring biased toward clamping the rope against an abutment but which is released from the rope by a manual lever.

None of the disclosures provide the advantages of quick engagement, quick release and quick security to the degree that is inherent in the present invention.

SUMMARY OF THE INVENTION

It is an object of this invention to provide a rope cleat that is characterized as providing a very quick engagement, protection against inadvertent release, and very quick release when required

It is another object to provide a cleat that permits holding a rope looped back from its original direction.

Another object of the invention is to provide a configuration of the a cam and rope abutment that is characterized by greater gripping strength than is provided by devices of the prior art.

This invention is directed toward a rope cleat comprising at least one cam swivally mounted on a base that is spring biased to rotate toward an abutment to seize a rope positioned between the surfaces of the cam and abutment.

A cover is manually located in a closed position over the rope when it is required to prevent the rope from escaping from between cam and abutment. The cover is located in a release position when it is required to quickly engage of disengage the rope from the cleat.

In one embodiment the cover is slidable from the closed position to the release position. In

another embodiment, the cover is swivally mounted to rotate from the cover position to the release position. In another version, the cover flips up to permit engagement and release of the rope.

In yet another embodiment, the cover is fixed and extends over an area of the base where the rope has been looped around the abutment and extends back in the direction from whence it came.

In one version, the cleat of this invention comprises a single cam in combination with a single abutment and a cover to secure the rope.

In another version, two abutments are arranged in combination with two cams to engage one rope or a pair of ropes with a cover or pair of covers.

In another version, two spring biased cams on separate pins face each other to grip the rope with a cover to secure the rope.

Another version has two cams, each one facing an abutment and sliding covers with wings for the rope to loop around if needed.

In any of the above embodiments, a spring is positioned to bias the cam or cams to turn toward the abutment or an opposing spring biased cam or cams.

BRIEF DESCRIPTION OF THE FIGURES

Fig 1. is an exploded view showing two cams and two abutments with sliding covers.

Fig. 2 is a perspective assembly view of fig. 1. with covers open for engaging or releasing

the ropes.

Fig. 3 is a perspective assembly view of fig. 1. with covers closed to retain the ropes and rope looping back.

Fig. 4 is a top view showing the pair of ropes retained in the cleat and the rope looped back.

Fig. 5 is an exploded view showing a rotating cover.

Fig. 6 is a top view of fig. 6 showing two positions of the rotating cover.

Fig. 7 shows a two way cleat.

Fig. 8 shows a pair of cams facing one abutment and a rotating cover which is another version of a two way cleat.

Fig. 9 shows a cleat with single cam, abutment and rotatable cover.

Fig. 10 shows a hinged cover.

Fig. 11 shows a rotating cover with a tail for retaining a looped rope.

Fig. 12 shows a pair of cams arranged to seize the rope when the rope is pulled in one direction and release the rope when the rope is pulled in the opposite direction.

Fig. 13 shows the rope between members of each pair of a plurality of pairs of cams.

Fig. 14 shows an embodiment with a fixed cover.

DESCRIPTION OF ILLUSTRATIVE EMBODIMENTS

Turning now to a discussion of the drawings, fig. 1 is an exploded perspective view of the cleat of this invention. There is shown a base 12 having a base surface 13 on which are

mounted a pair of rope abutments 14 A and 14B . Each abutment 14A and 14B has a toothed surface 16A and 16BB facing the other abutment 24 B and 24A , respectively. Two spindles, 18A and 18B, are mounted on the base surface 13 between the abutments 14 A,B. Two cams, 20A and 20B, are mounted on one spindle 18A. The second spindle 18B is a stop that limits rotation of cams 20A and 20B. One cam 20B has a toothed surface (not shown in fig. 1) that faces toward abutment 14B and cam 20A has a toothed surface 21A facing abutment 14A. A spring 22 having one end against cam 20A and another end against cam 20B biases cam 20A and cam 20B to rotate toward respective toothed surfaces 16 A and 16B. A pair of covers 26A and 16B B are shown which are slidably mounted on pedestals, 15A and 15B respectively. A stop 17 is shown which limits the slide distance of covers 26A and 26 B in the closed position. A pin (not shown) in the bottom of each of covers 26A,B slidably engage slots 21 A and 21B and limit the slide distance in the open position

Fig. 2 is a view of an assembly of fig. 1 showing covers 26A,B open (separated from stop 17) and ropes 24A and 24B positioned between the respective cams 20A,B and abutments 14A and 14B.

Fig. 3 shows the ropes 24A and 24B in position and covers 26A,B closed. An end of each cover, 26A and 26D, extends over an area of the base on the side of the abutment 14A and 14B opposite the cam thereby shielding the rope 24A pooped back over the base 12.

Fig. 4 is a top view of fig. 3 showing the position of the ropes to better advantage. The

covers 26A and 26B are closed preventing inadvertent escape of the ropes 24A and 24B.. The ropes 24A and 24B are held lightly by the spring 22 (shown in fig. 1.) When either rope 24 A or 24B is pulled (arrow A or B respectively) the frictional force of the rope 24 A or 24B against the cam surface 21 A or 21B rotates the cam 20A or 20B in a direction that seizes the rope 24 A or 24B between the toothed abutment surface 16 A or 16B and the toothed cam surface 21 A or 21B. The rope 24A or 24B is free to be pulled in the opposite direction of the arrows as the cam will rotate with the respective rope.

As shown in fig. 2, when both covers 26 A,B are slid open, a user is permitted to simply pull the rope away from engagement between the abutment 14 A,B and the respective cam 20A,B or into engagement between the abutment 14 A,B and the respective cam 20A,B when he desires to disengage or engage the rope 24 A,B from the respective cleat.

Fig. 5 is an exploded view of another embodiment of the invention in which a rotatable cover 19 is mounted on spindle 18A.. As shown in fig. 6, the rotatable cover 19 in one position permits quick engagement or withdrawal of ropes from the cleat and in another position (shown in phantom) prevents inadvertent withdrawal from the cleat. The rotatable cover 19 (fig. 6) replaces the sliding covers 26 A,B (fig.s 1, 2).

Fig. 7 illustrates another embodiment of the invention in which the rope is prevented from being pulled in either direction, A or B. There is shown a single abutment 14 with toothed

surface 16. Cam 20A and Cam 20B are rotatably mounted on a spindle 18. Spring 23 is positioned between cam 20A and cam 20B so that both cams 20 A,B rotate against rope 24. and force the rope against surface 16 of abutment 14. To permit rope 24 to slide in direction AA, the end of cam 20A is pressed in direction A. To permit rope 24 to slide in direction BB, the end of cam 20B is pressed in direction B.

Fig. 8 shows an embodiment for locking the rope against movement in either direction with rope 24 between pair of cams 20 A,B facing abutment 14 where each cam 20 A,B is mounted on its own spindle 18 D,E respectively. Cover 19E is rotatably mounted on spindle 19F and is rotatable from the open position as shown to the closed position over the rope.

Fig. 9 shows an embodiment in which one cam 20, is rotatably mounted on spindle 18 and biased by spring 11 to rotate against abutment surface 16 so that rope 24 between cam 20 and abutment 14 is prevented from moving in direction C. A leaf spring 11 is shown in fig. 9 however the scope of the invention also includes spring 11 being a torsion spring. A cover 19 is rotatably mounted on abutment 16 is rotatable between a cover position where the rope is restrained between the cam and abutment and a release position as shown in fig. 6. In an alternative version (not shown), cover 19 is mounted on spindle 18.

Fig. 10 shows a version of the invention including base 12, cam 20 and abutment 14 in which the cover 39 is hingeably attached to abutment 14 and biased by spring 37 to flip down over rope 24, retained between cam 20 and abutment 14, In an alternative version, (not shown) the flip-up cover is mounted on the cam spindle.

Fig. 11 shows a version including a rope 24 between abutment 14 and cam 20. The cam 20 and cover 51 are rotatably mounted on spindle 53. Pin 49 extends from base 12 permitting rope 24 to be looped back between pin 49 and cam 20. When cover 51 is rotated into position to retain the rope between cam 20 and abutment 14, the opposite "tail" end 53 of cover 51 retains the looped end of rope 24 between pin 49 and cam 11.

In fig. 14, the cover 19 is fixed and extends back over a section 24A of the rope 24 that has been looped back to extend in the direction from whence it came.

There has been described a rope cleat which features at least one cam and abutment and a cover that is positionable over the cam and abutment to prevent inadvertent disengagement of the rope. Three embodiments of cover have been described including, a sliding cover, a rotating cover and a hinged cover. In some versions, the cam is biased by a spring forcing the cam to rotate toward the abutment for further security.

In some versions, the covers have "tails" which help retain the rope when looped back

In some versions, each cam has a tail which aids in disengaging the rope.

Variations and modifications of the invention may be contemplated after reading the specification and studying the drawings which are within the scope of the invention.

For example, fig. 12 shows a pair of cams 20A and 20B oriented in the same direction to provide twice the holding strength of a single cam

Fig. 13 shows the rope 24 positioned between the members of each pair of a plurality of pairs of cams. There are shown a first pair of cams 18J and 18F and a second pair of cams 18G and 18F. The base 12 is shown partially cutaway. The cover 41 is shown in phantom and partially cutaway.

I therefore wish to define the scope of the invention by the appended claims.

I claim:

1. A rope cleat which comprises:

a base having a flat base surface;

an abutment means for gripping rope mounted on said base surface and having an abutment surface perpendicular to said base surface;

a first spindle having one end mounted on said base surface and extending perpendicularly away from said base surface.

a first cam rotatably mounted on said first spindle;

said first cam having a first cam surface perpendicular to said base surface and convex toward said abutment surface;

said first cam operably arranged to permit positioning a rope between said first cam surface and said abutment surface and to provide that when tension is applied to said rope in one direction, said rope is seized between said cam surface and abutment surface by said cam rotating toward said abutment and when tension is applied to said rope in an opposite direction, said rope is released from between said cam surface and and abutment surface permitting withdrawal of said rope;

a cover means for retaining said rope between said abutment surface and said cam surface when said cover means is in a retain position and for permitting engagement and withdrawal of said rope from between said abutment surface and said cam surface when said cover means is in a release position.

2. The cleat of claim 1 wherein said cover means comprises:

a pedestal having one end secured to said base surface and extending perpendicularly away from said base surface;

a cover slidably engaging another end of said pedestal and operably arranged for sliding over said cam and abutment between said retain position and said release position.

3. The cleat of claim 1 wherein said cover means is rotatably mounted on one of:

- (i) another end of said spindle;
- (ii) on said abutment means; and

said cover is operably arranged to rotate between said retain and release positions.

4. The cleat of claim 3 wherein:

said cover means is rotatably mounted on said abutment means;

said cover means has one end which is rotatable over space between said abutment surface and cam surface and a tail end ;

a pin extending from said base surface on a side of said abutment opposite said cam providing that, when said rope is positioned between said abutment surface and said cam surface and looped around said abutment surface between said pin and said abutment, then when said cover means is rotated to said retain position, said tail end of said cover means extends over space between said pin and said abutment.

5. The cleat of claim 1 further comprising a spring means for biasing said first cam surface toward said abutment surface.

6. The cleat of claim 5 wherein said spring means is one of a torsion spring and a leaf spring.

7. The rope cleat of claim 5 wherein said spring means comprises a spring having one end coupled to an extended end of said spindle and another end engaging said cam.

9. The rope cleat of claim 1 further comprising:

a second cam mounted on another end of said spindle and operably arranged for rotation between said retain and release positions;

said second cam having a second cam surface perpendicular to said base surface and convex toward said abutment surface; and

said second cam surface operably arranged to permit positioning a rope between said second cam surface and said abutment surface providing that when tension is applied to said rope in one direction, said rope is seized between said second cam surface and abutment surface by said cam rotating toward said abutment; and when tension is applied to said rope in an opposite direction, said rope is seized by said first cam

10. The rope cleat of claim 5 further comprising spring means having one spring end abutting said first cam and a second spring end abutting said second cam operably arranged to bias said first cam surface toward said abutment means and said second cam surface toward said abutment means;

means for manually rotating said first and second cams away from said abutment.

11. The rope cleat of claim 9 wherein said abutment means comprises:

a first abutment having a first abutment surface facing said first cam surface;

a second abutment facing said second cam surface.

12. The rope cleat of claim 1 wherein:

said abutment means is a plurality of :abutments, each having an abutment surface;

a plurality of cams;

a plurality of spindles;

a plurality of spindles;

each abutment surface facing at least one of said cams rotatably mounted on one of said spindles, respectively.

13.. A rope cleat comprising:

a base having a base surface;

a first rope abutment mounted on said base surface and having a first abutment surface perpendicular to said base surface;

a second rope abutment mounted on said base surface and having a second abutment surface perpendicular to said base surface;

a first spindle having one end mounted on said base surface and extending perpendicularly away from said base surface.

a first cam rotatably mounted on said first spindle;

said first cam having a first cam surface perpendicular to said base surface and convex toward said first abutment surface;

said first cam operably arranged to permit positioning a rope between said first cam surface and said abutment surface and to provide that when tension is applied to said rope in one direction, said rope is seized between said cam surface and abutment surface by said cam rotating toward said first rope abutment and when tension is applied to said rope in an opposite direction, said rope is released from tension and can be removed from said cleat;

a second cam rotatably mounted on said first spindle;

said second cam having a second cam surface perpendicular to said base surface and convex toward said second abutment surface;

said second cam operably arranged to permit positioning a rope between said second cam surface and said second abutment surface and to provide that when tension is applied to said rope in one direction, said rope is seized between said second cam surface and second abutment surface by said second cam rotating toward said second rope abutment and when tension is applied to said rope in an opposite direction, said rope is released from tension and can be removed from said cleat;

a second spindle having one end mounted on said base surface and extending perpendicularly away from said base surface;

said second spindle positioned to limit rotation of said first cam away from said first abutment and to limit rotation of said second cam away from said second abutment surface;

a spring positioned with one end abutting said first cam and another end abutting said second cam operably arranged to bias said first cam surface toward said first abutment surface and to bias said second cam surface toward said second abutment surface;

a first pedestal having one end secured to said base surface and extending perpendicularly away from said base surface;

a first cover slidably mounted on another end of said first pedestal and operably arranged to slide between a position where said rope is restrained from escaping from between said first abutment surface and said first cam surface by a first end of said first cover and a position where said rope is permitted to be engaged and withdrawn from between said first abutment surface and said first cam surface;

a second pedestal having one end secured to said base surface and extending perpendicularly away from said base surface;

a second cover slidably mounted on another end said second pedestal and operably arranged to slide between a position where said rope is restrained from escaping from between said second abutment surface and said second cam surface by a first end of said second cover and a position where said rope is permitted to be engaged and withdrawn from between said second abutment surface and said second cam surface.

14. The cleat of claim 13 wherein said first and second covers each have a second end opposite said respective first end operably arranged when said respective covers are in said position where said rope is restrained to extend over said base surface.

15. A rope cleat which comprises:

a base having a flat base surface;

an abutment means for gripping rope mounted on said base surface and having an abutment surface perpendicular to said base surface;

at least one spindle having one end mounted on said base surface and extending perpendicularly away from said base surface.

at least one cam;

each one spindle of said at least one spindle having only one cam of said at least one cam rotatably mounted on said each one spindle;

said one cam having a first cam surface perpendicular to said base surface and convex toward said abutment surface;

all of said at least one cam operably arranged to permit positioning a rope between said respective first cam surface and said abutment surface and to provide that when tension is applied to said rope in one direction, said rope is seized between said first cam surface of all of said at least one cam and abutment surface by all of said at least one cam rotating toward said abutment and when tension is applied to said rope in an opposite direction, said rope is released from between said first cam surface of all of said at least one cam and abutment surface permitting withdrawal of said rope;

a cover means for retaining said rope between said abutment surface and said cam surface when said cover means is in a retain position and for permitting engagement and withdrawal of said rope from between said abutment surface and said cam surface when said cover means is in a release position.

16. A rope cleat which comprises:

a base having a flat base surface;

at least one pair of spindles, each spindle having one end mounted on said base surface and extending perpendicularly away from said base surface.

at least one pair of cams;

each spindle of said at least one pair of spindles having only one of said cams of said at least one pair of cams rotably mounted on said each spindle;

each cam of each pair of cams having a cam surface perpendicular to said base surface and convex toward a cam surface of another cam of said each pair of cams;

said at least one pair of cams operably arranged to permit positioning a rope between said cam surfaces of each pair of cams to provide that when tension is applied to said rope in one direction, said rope is seized between said cam surfaces of each pair of cams and when tension is applied to said rope in an opposite direction, said rope is released from between said cam surfaces permitting withdrawal of said rope;

a cover means for retaining said rope between said cam surfaces of said at least one pair of cams when said cover means is in a retain position and for permitting engagement and withdrawal of said rope from between cams of said at least one pair of cams when said cover means is in a release position.

17. A rope cleat which comprises:

a base having a flat base surface;

an abutment means for gripping rope mounted on said base surface and having an abutment surface perpendicular to said base surface;

a first spindle having one end mounted on said base surface and extending perpendicularly away from said base surface.

a first cam rotatably mounted on said first spindle;

said first cam having a first cam surface perpendicular to said base surface and convex toward said abutment surface;

said first cam operably arranged to permit positioning a rope between said first cam surface and said abutment surface and to provide that when tension is applied to said rope in one direction, said rope is seized between said cam surface and abutment surface by said cam rotating toward said abutment and when tension is applied to said rope in an opposite direction, said rope is released from between said cam surface and and abutment surface permitting withdrawal of said rope;

a cover means for retaining said rope that has been looped around said abutment and extends in a direction from whence it came.

ABSTRACT

A rope cleat including at least rope abutment and at least one cam mounted on a flat base surface. The cam is spring biased to rotate toward an abutment surface. A cover is positionable over the cam and abutment such that, in one position, the rope is restrained from inadvertent withdrawal from between the cam and abutment and in another position permits quick engagement and withdrawal of the rope from between the cam and abutment. One version of the invention is a sliding cover. Another version of the invention is a cover that is rotatable between the retain and withdrawal positions. Yet another version is a flip up cover. In one embodiment, a single cam-abutment-cover assembly is mounted on the base surface. In another embodiment, a cam-abutment-cover pair is mounted on the base surface. In another embodiment, a cam-cam-cover is mounted on a base surface where the cams rotate toward each other to secure the rope. In yet another embodiment, a cam-cam-cover is mounted on a base surface where the cams rotate toward the same abutment but start 180° from each other on the same pin or two pins in line with the abutment. In this embodiment, once the rope is between the cams and the abutment it is prevented from moving in either direction until disengaged. The principles of the quick release cover of this invention are applicable to a plurality of cam-cam, abutment-cam combinations.

Fig. 1

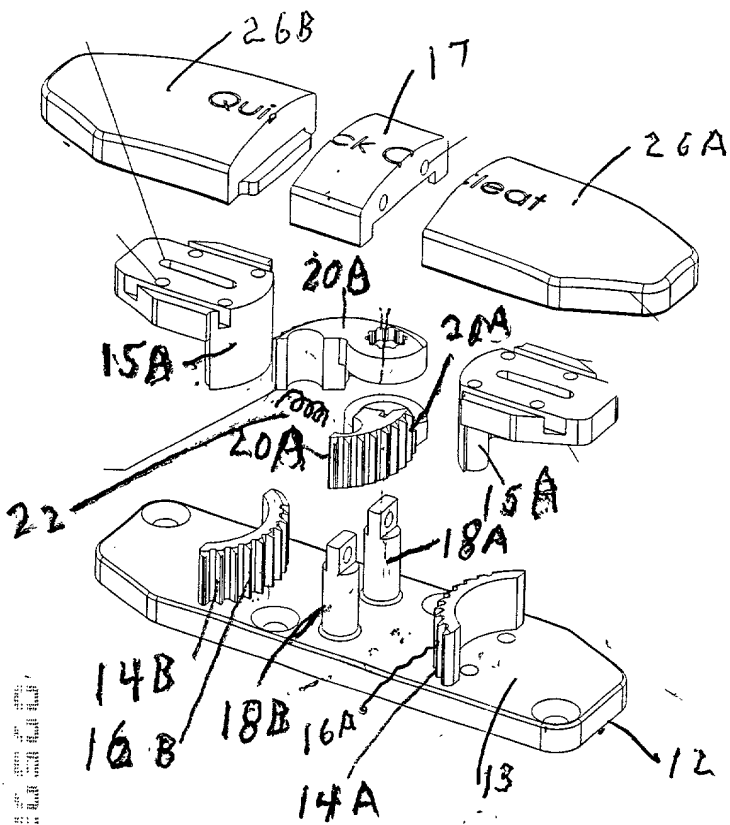


Fig. 2

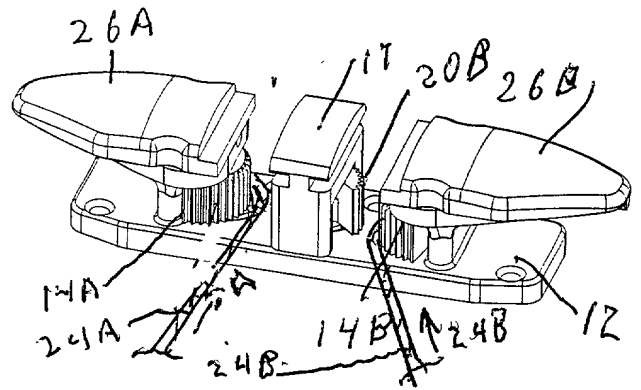


Fig. 3

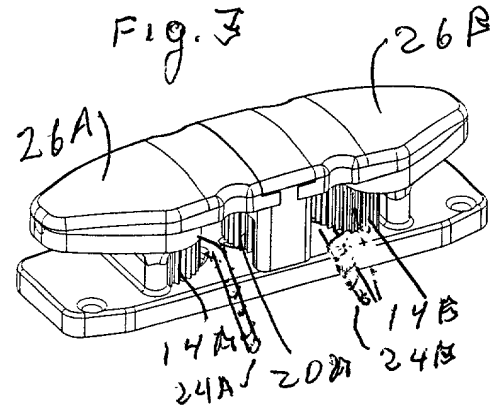


Fig. 4

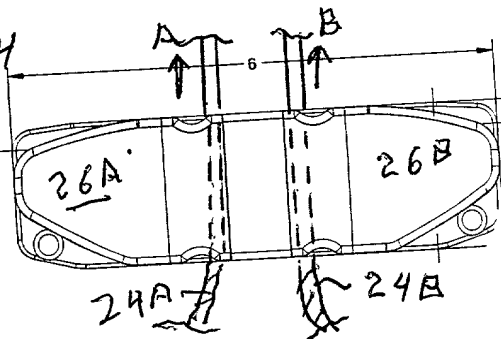


Fig. 5

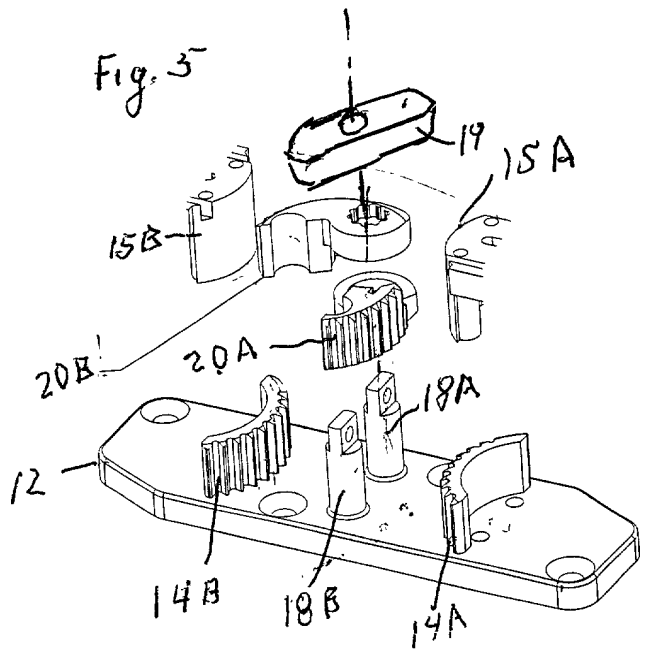


Fig. 6

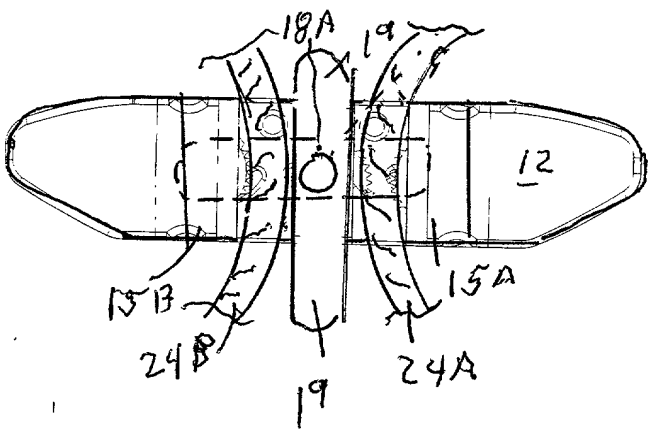
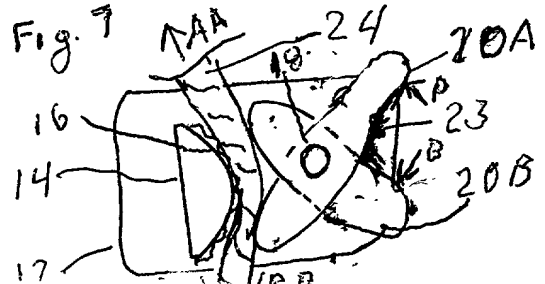
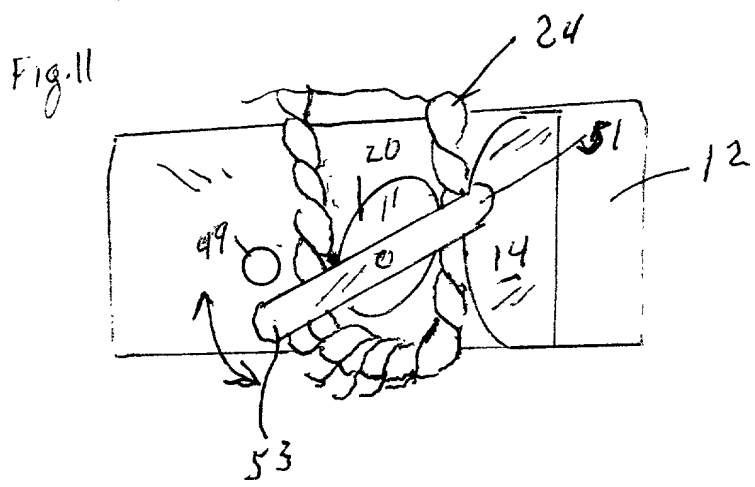
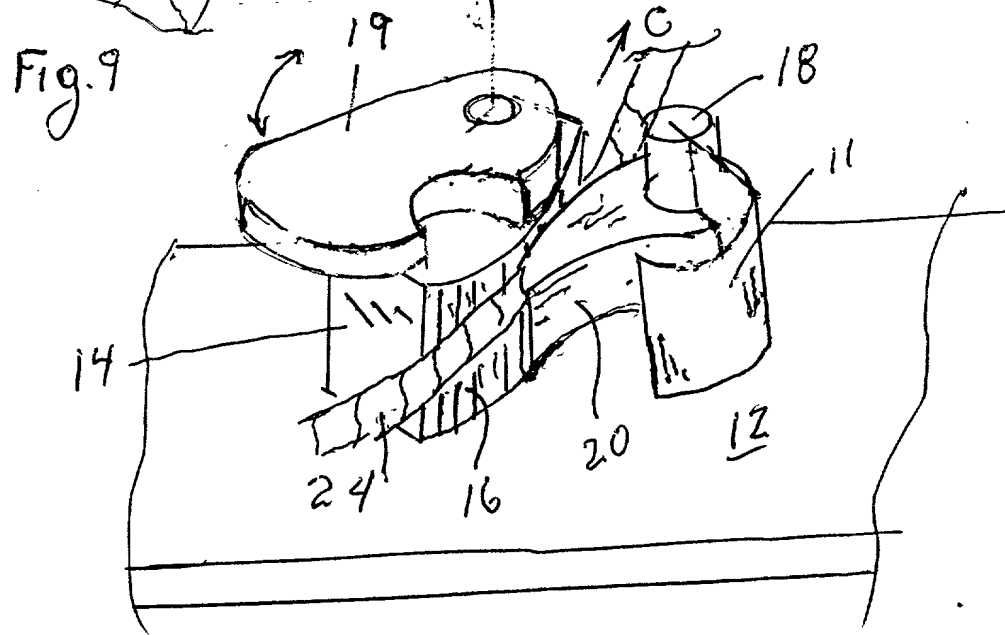
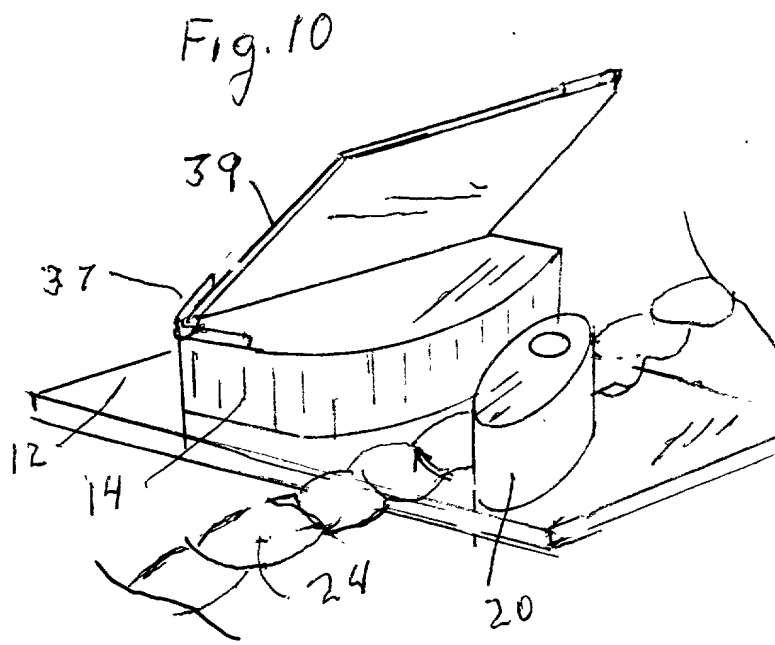
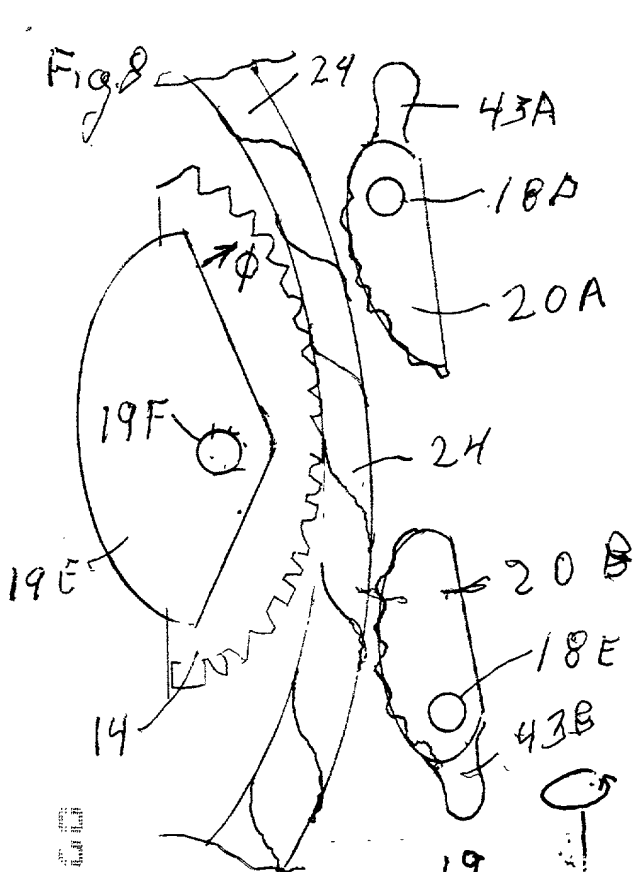
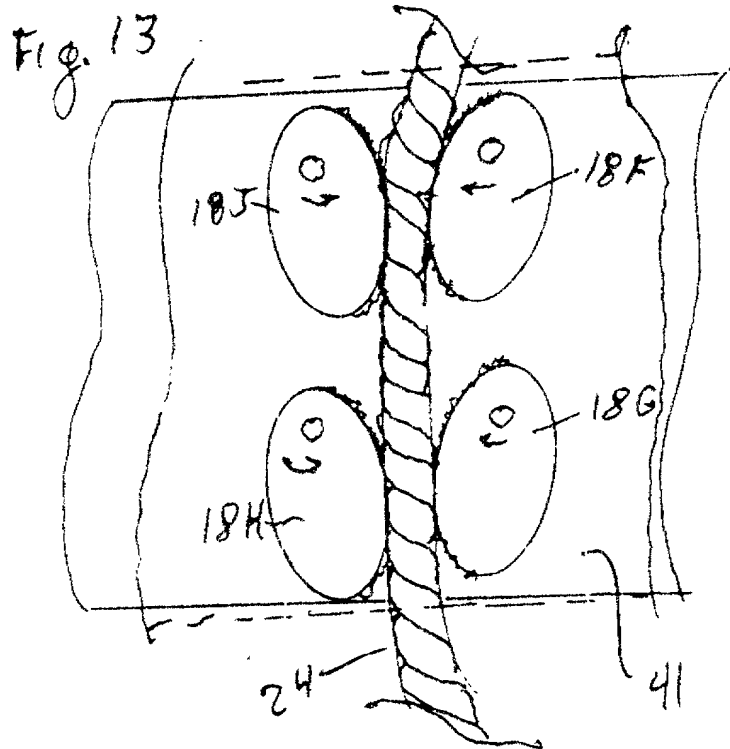
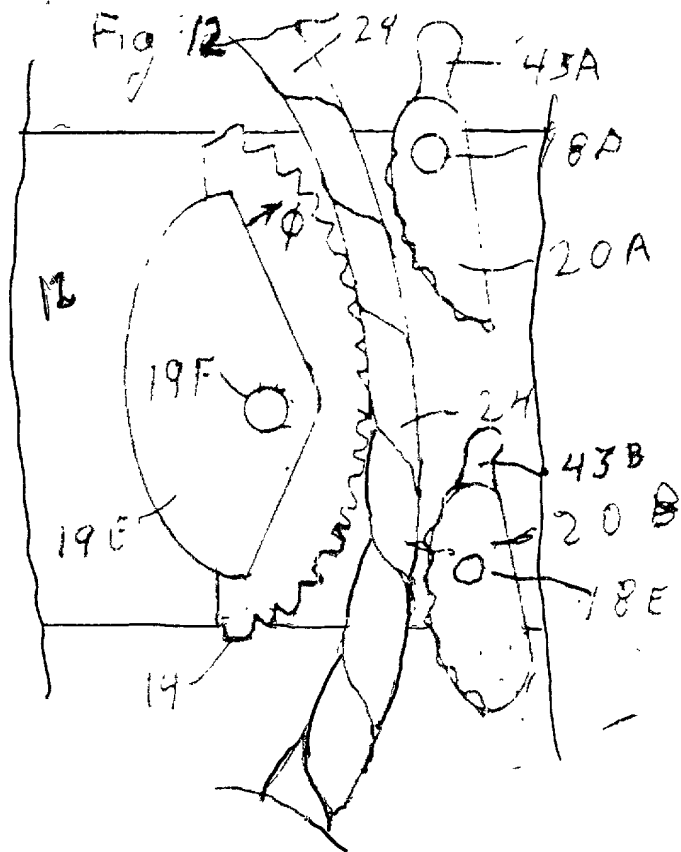
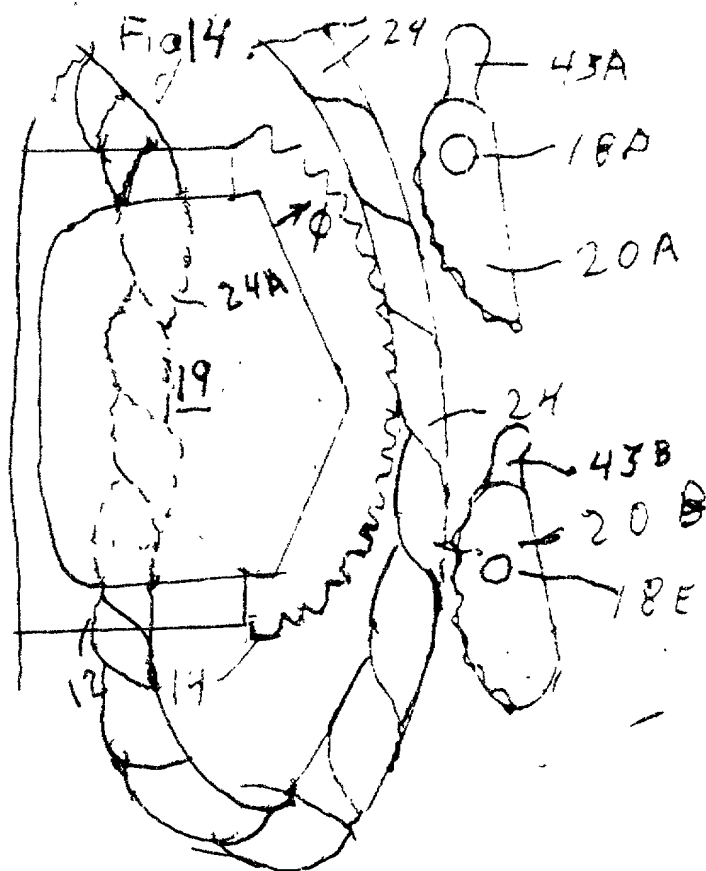



Fig. 7









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☐ Declaration
Submitted
with Initial
Filing

OR

☐ Declaration
Submitted after
Initial Filing

Attorney Docket Number **RSWC**

First Named Inventor **W. Casey**

COMPLETE IF KNOWN

Application Number

Filing Date

Group Art Unit

Examiner Name

As a below named inventor, I hereby declare that:

My residence, post office address, and citizenship are as stated below next to my name

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled:

Quick Engage/Disengage Rope Cleat
(Title of the invention)

the specification of which

☒ is attached hereto

OR

☐ was filed on (MM/DD/YYYY)

as United States Application Number or PCT International

Application Number and was amended on (MM/DD/YYYY) (if applicable)

I hereby state that I have reviewed and understand the contents of the above identified specification, including the claims, as amended by any amendment specifically referred to above

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				Yes	No
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			<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

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[Page 1 of 2]

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Name of Sole or First Inventor:		<input type="checkbox"/> A petition has been filed for this unsigned inventor	
Given Name (first and middle (if any))		Family Name or Surname	
William H. Casey			
Inventor's Signature	Wm H Casey	Date	06-07-00
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ZIP	95033	Country	USA

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